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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/699,228	10/28/2000	Suhail Nanji	004906.P008	8377

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EXAMINER	
WON, MICHAEL YOUNG	

ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 09/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/699,228	NANJI ET AL.
	Examiner	Art Unit
	Michael Y Won	2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 June 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-9, 12, 16, 23, and 26 have been amended.

2. Claims 1-29 have been examined and are pending with this action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1, 6, 9, 12, 16, 23, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Hall et al (US 5,826,023 A).

As per claims 1 and 26, Hall teaches a computer implemented method and a machine readable medium that provides instructions, which when executed by a set of processors, cause said set of processors to perform the method comprising: receiving at a first network element of a network provider a subscriber session with a first tunneling protocol (see col.3, lines 42-48 and col.3, line 65 to col.4, line 2); determining whether the subscriber session is to be routed to a destination using a second tunneling protocol

that is different than the first tunneling protocol (see col.3, lines 45-64); routing at least a portion of the subscriber session to a second network element within the network, if the subscriber session is to be routed to the destination using the second tunneling protocol (see Fig.4, #270-#274 and col.4, lines 14-17), the second network element being dedicated within the network to handle the second tunneling protocol (see Fig.4, #274); and switching the subscriber session out via the second network element using the second tunneling protocol (see col.8, lines 56-57).

As per claim 6, Hall teaches a computer implemented method comprising: receiving a session encapsulated with a first of a plurality of tunneling protocol (see col.8, lines 60-61), the session having a control message (see col.9, lines 5-10); decapsulating the encapsulated session to extract the control message (see col.9, lines 20-21); using the control message to determine if the session is to be transmitted with a second plurality of tunneling protocol different than the first tunneling protocol (see Fig.4: #270-#274 and col.9, lines 8-10); if the session is to be transmitted with the second tunneling protocol, to creating a session structure indicating the second of the plurality of tunneling protocol associating the session with the session structure (see col.3, lines 45-64); and transmitting the session as indicated by the session structure, wherein the session is encapsulated with the second tunneling protocol based on the protocol information stored within the session structure prior to transmitting the session to a destination (see col.8, lines 56-57).

As per claims 9 and 12, Hall teaches a computer implemented method comprising: receiving a subscriber session encapsulated with a first of a plurality of tunneling protocol (see col.8, lines 60-61); determining that the subscriber session is to be transmitted with a second of the plurality of tunneling protocols different than the first tunneling protocol (see Fig.4: #270-#274 and col.3, lines 45-64); creating a session and associating the subscriber session with the session structure, the session structure indicating the second of the plurality of tunneling protocol (see col.3, lines 45-64); and transmitting the session as indicated by the session structure, wherein the session is encapsulated with the second tunneling protocol based on the protocol information stored within the session structure prior to transmitting the session to a destination (see col.8, lines 56-57).

As per claims 16 and 23, Hall teaches a network element and an apparatus comprising: a circuit or a network interface card to receive a session or a set of data (see col.3, lines 65-66), the session or set of data being encapsulated with a first tunneling protocol (see col.2, lines 3-7); a computer logic to determine if the session or set of data is to be transmitted with a second tunneling protocol different than the first tunneling protocol (see Fig.4: #270-#274), to encapsulate the session or set of data with the second tunneling protocol if the computer logic determines that the session or set of data is to be transmitted with the second tunneling protocol (see col.3, lines 45-64); and to transmit the session or set of data (see col.8, lines 56-57).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 20-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Araujo et al. (US 6,108,350 A).

As per claims 20, Araujo teaches a network element comprising: a tunnel decapsulation module to decapsulate a session received over an ingress tunnel according to a first or a plurality of protocols (see col.1, line 66 to col.2, line 3); a payload decapsulation module coupled to said tunnel decapsulation module to decapsulate a control packet that is part of said session (see col.1, line 66 to col.2, line 3); a control process coupled to said payload decapsulation module to determine if said

session is to be transmitted over an egress tunnel that uses one of said plurality of protocols (see col.8, lines 9-31); a tunnel module, coupled to said tunnel encapsulation module and said control to process, to encapsulate the traffic from said session in the one of said plurality of protocols used for said egress tunnel (see col.2, lines 34-42).

As per claim 21, Araujo teaches of further comprising determining whether the second of the plurality of tunneling protocols is supported or stored locally, and to access the second of the plurality of protocols from a remote server if not supported or stored locally (see implicit: Fig.3A, #304 and col.12, lines 62-65).

As per claim 22, Araujo further teaches wherein said tunnel module includes at least two of said plurality of protocols (implicit: see col.7, lines 20-22 and 38-42).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2-5, 7, 8, 10, 11, 13-15, 17-19, 24, 25, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall et al. (US 5,826,023 A) in view of Sitaraman et al. (US 6,212,561 B1).

As per claim 2, Hall does not explicitly teach wherein the subscriber session is a set of packets originating from a subscriber, wherein the method further comprises authenticating the set of packets based on authentication, authorization, and accounting (AAA) information associated with the subscribers, and wherein the AAA information further includes information regarding whether the set of packets should be switched out and which tunneling protocol should be used when the set of packets is routed to the destination. Sitaraman teaches wherein the subscriber session is a set of packets originating from a subscriber (see col.5, line 63 to col.6, line 2), wherein the method further comprises authenticating the set of packets based on authentication, authorization, and accounting (AAA) information associated with the subscribers (see col.6, lines 24-35), and wherein the AAA information further includes information regarding whether the set of packets should be switched out and which tunneling protocol should be used when the set of packets is routed to the destination (see col.2, lines 23-45). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Sitaraman within the system of Hall by implementing authenticating subscriber session packets using AAA information and determining which tunneling protocol should be used from the AAA information because Sitaraman teaches that "AAA servers contain large data bank of stored service

profiles... connected with an individual user/subscriber" and the AAA server sends the gateway an "access-accept" response packet containing "the necessary configuration data that enables the SSG to provide the desired service to the user" (see col.6, lines 36-54). Therefore, such an implementation enables a central location to determine the configurations of a user's service allowing ease of scalability and management.

As per claims 3 and 27, Hall further teaches wherein switching the subscriber session comprises: determining the subscriber session is to be transmitted with the second tunneling protocol based on a result of the authenticating the set of packets (see claim 2 rejection above); decapsulating the subscriber session to extract a payload of the subscriber session according to the first tunneling protocol (see col.9, lines 20-21); encapsulating the extracted payload of the subscriber session with the second tunneling protocol (see Fig.4: #274; col.3, lines 45-64; and col.8, lines 60-61); and transmitting the encapsulated subscriber session to the destination (see col.8, lines 56-57).

As per claim 4, Hall teaches of further comprising: determining whether any of local network elements is capable of handling the second tunnel protocol: identifying a remote network element that is capable of handling the second tunneling protocol, if no local network element within the network provider is capable of handling the second tunneling protocol (see Fig.4: #270-#274); remotely invoking an encapsulation process from the remote network element to encapsulate the payload of the subscriber session (see col.8, lines 60-61).

As per claim 5, Hall teaches further comprising remotely invoking a decapsulation process from the remote network element to decapsulate the subscriber session according to the first tunneling protocol, if no local network element within the network provider is capable of handling the first tunneling protocol (see Fig.4 and col.9, lines 20-21).

As per claim 7, Hall does not explicitly teach of using the control message to determine if the session is to be transmitted with the second tunneling protocol, further comprising: retrieving a subscriber record from a database, the subscriber record including authentication, authorization, and accounting information and the record or set of data corresponding to the subscriber indicated by the control message; determining whether the session is to be tunneled out and which tunneling protocol should be used when the session is tunneled out, based on the record (see claim 2 rejection above).

As per claim 8, Hall teaches of further comprising: encapsulating the session with the second tunneling protocol determined from the record (inherent because of the determining step, see Fig.4, #270-#274); transmitted the encapsulated session to a destination (see col.8, lines 56-57), wherein the session is decapsulated according to the second tunneling protocol at the destination (see col.9, lines 20-21).

As per claims 10, 11, and 17, Hall further teaches of using the control message to determine if the session is to be transmitted with the second tunneling protocol (see Fig.4, #270-#274), further comprising: retrieving a subscriber record or set of data by

a control module; the record or set of data corresponding to the subscriber indicated by the control message; determining if the record or set of data indicates the subscriber is to be tunneled out; and if so, the record or set of data indicating the second tunneling protocol; and wherein associating the session to the session structure comprises processing the session as indicated by the session structure by a tunneling module (see claim 2 rejection above).

As per claims 13, 18, 24 and 28, Hall further teaches wherein the first tunneling protocol can be a compulsory or voluntary protocol (see Fig.4, #250 and #252).

As per claims 14, 19, 25, and 29, Hall further teaches wherein the second tunneling protocol is a compulsory protocol (implicit: see Fig.#4, #274: the Distribution Service of Protocol II will repeat the steps similar to the teachings of #240, Distribution Services Data Object).

As per claim 15, Hall teaches of further comprising determining whether the second of the plurality of tunneling protocols is supported or stored locally, and to access the second of the plurality of protocols from a remote server if not supported or stored locally (see Fig.4).

Response to Arguments

6. Applicant's arguments with respect to claims 1-19 and claims 23-29 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments with respect to claims 20-22, does not apply since independent claim 20 has not been amended. Claim 20-22 remains rejected in view of Araujo et al. (US 6,108,350 A).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Y Won whose telephone number is 703-605-4241. The examiner can normally be reached on M-Th: 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T Alam can be reached on 703-308-6662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Y. Won

August 30, 2004

HOSAIN ALAM
SUPERVISORY PATENT EXAMINER